Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A holographic recording method comprising: splitting a laser beam from a laser beam source into an object beam and a reference beam; modulating an intensity of the object beam according to information to be recorded; modulating an incident angle of the reference beam onto a holographic recording medium; and projecting each of the object beam and the reference beam onto the holographic recording medium to thereby form interference fringes, wherein

a beam shape of the reference beam is an elongated shape having a minor axis in a plane containing incident optical axes of the reference beam for the respective incident angles and having a major axis in a plane orthogonal to the plane.

2. (Original) The holographic recording method according to claim 1, wherein

the major axis of the elongated beam shape of the reference beam is coincident with an outer diameter of a beam shape of the object beam.

3. (Currently Amended) The holographic recording method according to claim 1 ~~or 2~~, wherein

the beam shape of the reference beam is one of an elliptical shape and a rectangular shape.

4. (Currently Amended) The holographic recording method according to claim 1 ~~or 2~~, wherein

a ratio between the minor axis and the major axis of the elongated shape is 2:3 to 3:8.

5. (Original) The holographic recording method according to claim 3, wherein a ratio between the minor axis and the major axis of the elongated shape is 2:3 to 3:8.

6. (Original) A holographic recording apparatus, comprising: a laser beam source; a beam splitter which splits a laser beam emitted from this laser beam source into an object beam and a reference beam; an object optical system which guides the object beam split by this beam splitter to a holographic recording medium; and a reference optical system which guides the reference beam to the holographic recording medium, wherein:

the reference optical system is configured to include: a beam shaping optical system which transforms a beam shape of the reference beam into an elongated shape; and an angle modulator which guides the reference beam having the beam shape transformed into the elongated shape by this beam shaping optical system to the holographic recording medium with an incident angle modulated, which are arranged in this order from the side of the beam splitter;

the object optical system is configured to include: a spatial light modulator which modulates an intensity of the object beam according to information to be recorded; and a Fourier lens, which are arranged in this order from the side of the beam splitter; and

the beam shaping optical system is configured such that a minor axis of the elongated shape is coincident with an angle multiplex direction by means of the angle modulator.

7. (Original) The holographic recording apparatus according to claim 6, wherein

the beam shaping optical system comprises at least one cylindrical lens which narrows the beam shape of the reference beam in a direction of the minor axis.

8. (Currently Amended) The holographic recording apparatus according to claim 6 ~~or 7~~, wherein

the beam shaping optical system is configured to transform the beam shape of the reference beam into one of an elliptical shape and a rectangular shape.

9. (Currently Amended) A holographic memory reproducing method for reproducing information recorded on a holographic recording medium which has a holographic recording region in which the information is angle-multiplex-recorded as interference fringes of an object beam and a reference beam, the holographic recording region having a recording unit formed into an elongated shape as viewed from an incident direction of one of the object beam and the reference beam, the elongated shape having a minor axis coincident with a direction of angle multiplex recording, the method comprising:

projecting a search-specific laser beam provided with search data onto the holographic recording medium along the same optical axis as that of the ~~reference~~object beam to thereby generate a plurality of diffraction beams on lines extending the optical axis of the reference beam having passed through the holographic recording medium; receiving these diffraction beams by an address detector in which a distance from the holographic recording medium is set such that beam spots on lines extending the reference beam having passed through the holographic recording medium for respective incident angles are adjacent to each other with a spacing therebetween on a light receiving surface; allowing the incident angle of the reference beam which angle corresponds to a beam spot having a maximum light intensity among a plurality of the received beam spots to serve as an address of the search data; and receiving, on a line extending the optical axis of the search-specific laser beam having passed through the holographic recording medium, a diffraction beam generated by a reproduction beam

projected along the optical axis of the reference beam by means of a two-dimensional photodetector using this address to thereby reproduce the information.

10. (Currently Amended) The holographic memory reproducing method according to claim 9, wherein

the reproduction beam is emitted from a light emitting point corresponding to the address in a light emitting array capable of emitting the reproduction beam from a plurality of light emitting point positions each of which provides the same incident angle ~~light intensity~~ as the incident angle to the holographic recording medium upon the angle multiplex recording.

11. (Original) A holographic memory reproducing apparatus for reproducing information recorded on a holographic recording medium which has a holographic recording region in which the information is angle-multiplex-recorded as interference fringes of an object beam and a reference beam, the holographic recording region having a recording unit formed into an elongated shape as viewed from an incident direction of one of the object beam and the reference beam, the elongated shape having a minor axis coincident with a direction of angle multiplex recording,

the holographic memory reproducing apparatus comprising:

a reproducing optical system which projects a reproduction beam onto the holographic recording medium along the same optical axis as that of the reference beam;

a search optical system which projects a search beam onto the holographic recording medium along the same optical axis as that of the object beam;

an address detector which is arranged on a line extending the optical axis of the reference beam having passed through the holographic recording medium; and

a two-dimensional photodetector which is arranged on a line extending the optical axis of the search beam having passed through the holographic recording medium, wherein

a distance of the address detector from the holographic recording medium is set such that beam spots on lines extending the reference beam having passed through the holographic recording medium for respective incident angles are adjacent to each other with a spacing therebetween on a light receiving surface.

12. (Currently Amended) The holographic memory reproducing apparatus according to claim 11, wherein

the reproducing optical system comprises a light emitting array which emits the reproduction beam from a plurality of light emitting point positions each of which provides the same incident angle ~~light intensity~~ as the incident angle of the reference beam to the holographic recording medium upon the angle multiplex recording.

13. (Canceled).

14. (Currently Amended) A holographic recording and reproducing apparatus comprising: a laser beam source; a beam splitter which splits a laser beam emitted from this laser beam source into an object beam and a reference beam; an object optical system which guides the object beam split by this beam splitter to a holographic recording medium; a reference optical system which guides the reference beam to the holographic recording medium; an address detector which is arranged on a line extending an optical axis of the reference beam having passed through the holographic recording medium; and a two-dimensional photodetector which is arranged on a line extending an optical axis of the object beam having passed through the holographic recording medium, wherein:

the reference optical system is configured to include: a beam shaping optical system which transforms a beam shape of the reference beam into an elongated shape; and an angle modulator which guides the reference beam having the beam shape transformed into the elongated shape by this beam shaping optical system to the holographic recording medium with an incident angle modulated, which are arranged in this order from the side of the beam splitter;

the object optical system is configured to include: a spatial light modulator which modulates an intensity of the ~~reference~~object beam according to information to be recorded; and a Fourier lens, which are arranged in this order from the side of the beam splitter;

the beam shaping optical system is configured such that a minor axis of the elongated shape is coincident with an angle multiplex direction by means of the angle modulator; and

a distance of the address detector from the holographic recording medium is set such that beam spots on lines extending the reference beam having passed through the holographic recording medium for respective incident angles are adjacent to each other with a spacing therebetween on a light receiving surface.

15. (Original) The holographic recording and reproducing apparatus according to claim 14, wherein

the major axis of the elongated shape of the reference beam is coincident with an outer diameter of a beam shape of the object beam.

16. (Currently Amended) The holographic recording and reproducing apparatus according to claim 14 ~~or 15~~, wherein

the beam shaping optical system transforms the beam shape of the reference beam into one of an elliptical shape and a rectangular shape.

17. (Currently Amended) The holographic recording and reproducing apparatus according to claim 14 ~~or 15~~, wherein

the beam shaping optical system comprises at least one cylindrical lens which narrows the beam shape of the reference beam in a direction of the minor axis.

18. (Original) The holographic recording and reproducing apparatus according to claim 16, wherein

the beam shaping optical system comprises at least one cylindrical lens which narrows the beam shape of the reference beam in a direction of the minor axis.

19. (Original) A holographic recording medium having a holographic recording region in which information is angle-multiplex-recorded as interference fringes of an object beam and a reference beam, wherein

the holographic recording region has a recording unit which is formed into an elongated shape as viewed from an incident direction of one of the object beam and the reference beam and a minor axis of the elongated shape is coincident with a direction of angle multiplex recording.

20. (Original) The holographic recording medium according to claim 19, wherein

a shape of the holographic recording region is one of an elliptical shape and a rectangular shape as viewed from the incident direction of one of the object beam and the reference beam.

21. (New) The holographic recording method according to claim 2, wherein

the beam shape of the reference beam is one of an elliptical shape and a rectangular shape.

22. (New) The holographic recording apparatus according to claim 7, wherein

the beam shaping optical system is configured to transform the beam shape of the reference beam into one of an elliptical shape and a rectangular shape.

23. (New) The holographic recording and reproducing apparatus according to claim 15, wherein

the beam shaping optical system transforms the beam shape of the reference beam into one of an elliptical shape and a rectangular shape.

24. (New) The holographic recording and reproducing apparatus according to claim 15, wherein

the beam shaping optical system comprises at least one cylindrical lens which narrows the beam shape of the reference beam in a direction of the minor axis.